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SOURCE

Newspapers and periodical as indicated.

## INCREASED MECHANIZATION UPS KARAGANDA COAL PRODUCTION

Figures in parentheses refer to appended sources.

Miners of the Karaganda coal basin report that they completed the Five-Year Plan for coal output by 25 November 1950 and the 1950 year plan by 22 Depos cember 1950. Labor productivity for the basin was 15 percent higher than for 1949 (1)

Serikov, manager of the Leninugol' Trust, one of the important trusts in the Karagandaugol' Combine, stated in a conversation with a correspondent of Kazakhstanskaya Pravda that the workers in his trust had steadily increased their coal output and completed the first-quarter program ahead of schedule despite difficult winter conditions. He said that the daily output in the majority of mines was 8-10 percent higher than in 1950, and that the largest increase in output was being achieved by the Mines imeni Zhdanov, imeni Kalinin, and No 19, the largest mines in the trust.

Recently, Serikov continued, Donbass combines were put into operation in mines No 47. 48, and 49, and loading machines were sent to other mines. Work is organized on the cycle work schedule at several mechanized faces of the Mines imeni Kalinin, imeni Zhdanov, and No 49. Particularly great success was achieved by the first section of the Mine imeni Zhdanov which was the  $\Gamma_{\mathcal{H}}$ first in the trust to complete a cycle per day along a 160-meter face in a thick coal seam. (2) This is the Verkhnyaya Marianna seam, the thickest in the Karaganda coal basin, and it is being worked by several of the leading mines of the area.(3)

Serikov stated that after the first section of the Mine imeni Zhdanov had been converted to the cycle system, the average daily output doubled and the shift output per miner rose to 12 tons instead of the quota of 5 tons. He said that the section was using heavy KMP-1 cutting machines and heavy scraper conveyers and was delivering 1,080-1,100 tons of coal daily, that is, 345-365 tons above the plan.

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Speaking of the coal-mining combine, Serikov said that its productivity had increased 1,000 tons over December 1950, and that during March, operators of mining machinery had, for the first time, exceeded planned norms for utilizing their respective machines, mining 5,890 tons during the month with each combine instead of the planned 5.700 tons and exceeding the norm 1,650 tons per cading machine.

Operators in the second section of Mine No 19 had pushed the speed of the Dombass combine from 20-25 meters per hour to 40 meters and delivered 7,051 tens of coal during March. Workers of the Mine imeni Kalinin, Serikov concluded, have lowered production costs of coal 5.6 percent over 1950, thereby saving 250,000 rubles, and workers of Mine No 19 have reduced production costs of fuel 6.8 percent.(2)

Miners of Mine No hi were the first in the Karaganda basin to complete the quarter plan ahead of schedule and they saved over 200,000 rubles by lowering production costs on fuel. They pledged several trainloads of above-plan fuel by 1 May. Mine No 17-bis completed the quarter plan 10 days ahead of schedule. Whine No 35/34 has already mined nearly two trainloads of above-plan coal.(4) Morkers in this mine have recently put a Makarov self-propelled cutting and loading machine into operation. They have pledged to exploit to capacity all their mining machinery and to raise the daily output from 400 to 800 tons.(5)

Workers in the fifth section of Mine No 64/83 in Karaganda completed 27 cycles in March on a 175-meter mine face and cut 11,600 tons of coal with a Donbass combine, more than twice the quota for the machine. Operators in the section promised to mine 100,000 tons of coal between repair periods instead of the norm of 50,000 tons.(6)

Since the beginning of 1951, Karaganda Mine No 18, the largest in the Stalinggol Trust, has lagged greatly in its coal deliveries. The productivity of the mine's machinery is very low.(7)

Mechanization of Mine No 31 of the Karagandaugol Combine was basically completed in the fourth quarter of 1950. This mechanization showed two main trends: (1) machines which performed two or more operations were used, and (2) machines to mechanize specific processes were employed.

The GKM-6 combine is the chief means of mechanizing coal mining at mine faces working the Shestifutovyy seam. At present, four of these combines are in operation at three mine faces working this seam. The remaining faces have a weak roof and are watery, and consequently at these and at the mine faces working the Chetyrekhfutovyy seam, l.l meters thick, the use of a combine would be difficult and inexpedient. The chief devices for mechanizing coal mining under these circumstances are the KMP-1 heavy cutting machine to cut the coal and explosives for shooting.

The UFMYs-2 loading machine, designed by L. V. Yegorov, Laureate of a Stalin Prize and former chief of the mine, was selected to load coal at the mine face. A two-chain open conveyer, with teeth in the operating chain and a plow on the front side, serves as the loading unit of the UPMYs-2 machine. Nine such machines are operating in the Karaganda basin as a whole, including three at Mine No 31. The chief difficulty connected with the use of this machine is that a cutting machine must be used with it at the mine face, and the presence of two machines makes work organization more complicated. To eliminate this difficulty, Yegorov, modernizing the UPMYs-2, designed the Vostok which cuts the mine face and then loads the coal onto the conveyer. Both machines are constructed on a KMP-1 cutting-machine base. The loading mechanism of the Vostok is a one-chain, cantilever-like scraper conveyer. The machine has been tested and is in operation at one of the faces of Mine No 31.

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With the adoption of the above machines, four GKM-6 combines, and four loading machines, coal loading onto the conveyer at the mine faces of Mine No 31 has been completely mechanized. Work indexes are high at mine faces provided with these machines. For example, the following table gives figures for October 1950 for the fourth western mine face of section No 6, where a GKM-6 combine was in operation and for the fourth western face of section No 1 where a UPMYe-2 loading machine was employed. Both mine faces are working the Shestifutovyy seam.

	Fourth Western Mine Face of Section No 6	Fourth Western Mine Face of Section No l
Length of mine face (m) Thirkness of seam (m) Monthly advance of mine face (m) Depth of cut (m) Number of cycles per month Monthly output of mine face (t) Average daily output (t) Maximum daily output (t) Productivity per worker at mine face (t) Total number of workers at mine face Average fulfillment of norm (f) Timber consumption per 1.000 tons of output (cu m)	210 1.75 28.0 1.0 28 14.200 458 576 6.8 82 163.3	175 1.85 22.1 1.6 14 /sic/ 10,400 336 479 6.2 73 160.3
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At all mine faces, SGK-1 metal props are used; this permits a decrease in the consumption of timber to 4.5 cu m per 1,000 tons of coal output and also decreases the labor in propping. The laborious process of delivering timber to the mine faces has been reduced to a minimum.

The following table indicates savings achieved by using metal rather than wooden props.

o 1	onsumption f Timber per ,000 Tons of utput (cu m)	Cost of Labor to Convey Timber From RR Branch to Mine Face per Ton of Output (rubles)	Cost of Materials per 1,000 Tons of Output (rubles)
Metal Wooden	4.5 55√5	1.10 1.86	1,070 8,880
Consumption decrease	51.0	0.76	7,810

A winch created by workers of the mine machine shop according to a design of L. V. Yegorov is used to facilitate the moving of the mine-face conveyer and the delivery of equipment to the mine face. The same workers altered the design of the chutes of the SKR-11 conveyer and introduced a number of in provements in it. This facilitated the transfer of the SKR-11 conveyer and made it possible to use it in blasting and loading operations in place of the heavy STR-30 conveyer.

Shunting operations at the loading point of every mine face are also mechanized. The small Yegorov winch serves to pull the mine cars at a speed of 0.16 meters per minute. As a result the loading point is now serviced in a shift by one person instead of three, and this person also acts as operator of the mineface conveyer.

Mechanization of shunting operations has also increased the productivity of the electric locomotives by eliminating idle periods during the coupling and uncoupling of mine cars. All the mine face conveyers have remote control.

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Cutting of development drifts is mechanized as follows: A heavy cutting machine with a 2.5-3 meter bar is used to cut coal encountered in cutting drifts. A UMP i rock-leading machine is used for gathering up coal in drifts and rock in cross cuts | Coal and rock haulage from development workings is carried out by winches and electric locomotives. A speedy rate in cutting development workings has not yet been achieved, the maximum rate being about 70-80 meters per month.

All mine transport has been provided with new equipment and improved. At the main central gradient, belt conveyers have replaced endless cable haulage. The latter type of transport is used only to convey rocks, materials, and equipment and it has been improved also.

Mine No 31 is converting its mine faces to the cycle work schedule to exploit its new machinery to capacity. At present, the fourth western face of section No 6 is working on this schedule, and the mine is planning to have all its faces complete one cycle per 24 hours.

In  $19^{k}8$ , when the length of the fourth western face of section No 6 was 130 meters, operations with one Makarov combine regularly completed 1.5 cycles each 24 hours, but there were some drawbacks connected with this, particularly with a two-shift scheme of extraction. Then, the mine face was lengthened to 200 meters. A Makarov combine was still used and a cycle was completed each 24 hours with a yield of 550-750 tons during the two shifts devoted to coal extraction. At the new and deeper levels which are now being worked, the coal has turned out to be considerably tougher, and the Makarov combine. working at a face 210 meters long, could not complete a cycle in 24 hours because of the intense overheating of the motors, particularly of the middle and upper groups. As a result two combines had to be used at this mine face.

Multipurpose brigades, consisting of ten persons, are organized at every mine face. Operators of the mining machinery achieve high qualifications by taking special courses and participate actively in mastering and improving new machines and work methods.

Mine No 31 completed the Five-Year Plan 5 months ahead of schedule. The average daily coal output for 1950 was 1,350 tons above the prewar level or 163 percent of it, and 845 tons or 62 percent above the 1946 daily output. Labor productivity was 61 percent above that of 1946 and considerably exceeded the pre-

Despite Mine No 31's good points and high achievements, it still has a number of defects. The dispatcher service has not been organized. The system of central blocking in underground transport is not in operation. The belt hoist in the central gradient is not equipped with remote control. Mine workers are devoting every effort to complete total mechanization of the mine in the near future and to ensu e that every single mine face completes one cycle each 24 hours.(8)

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